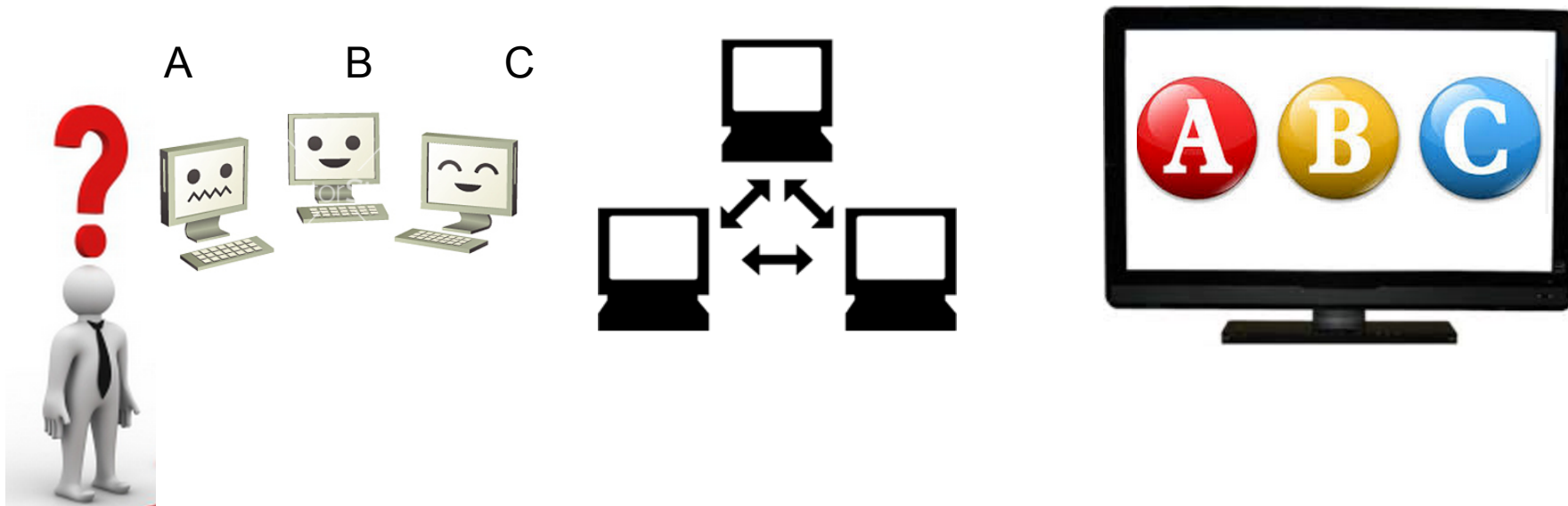




# History and motivation of the common *optics* project

Manuel Sanchez del Rio

# MOTIVATION

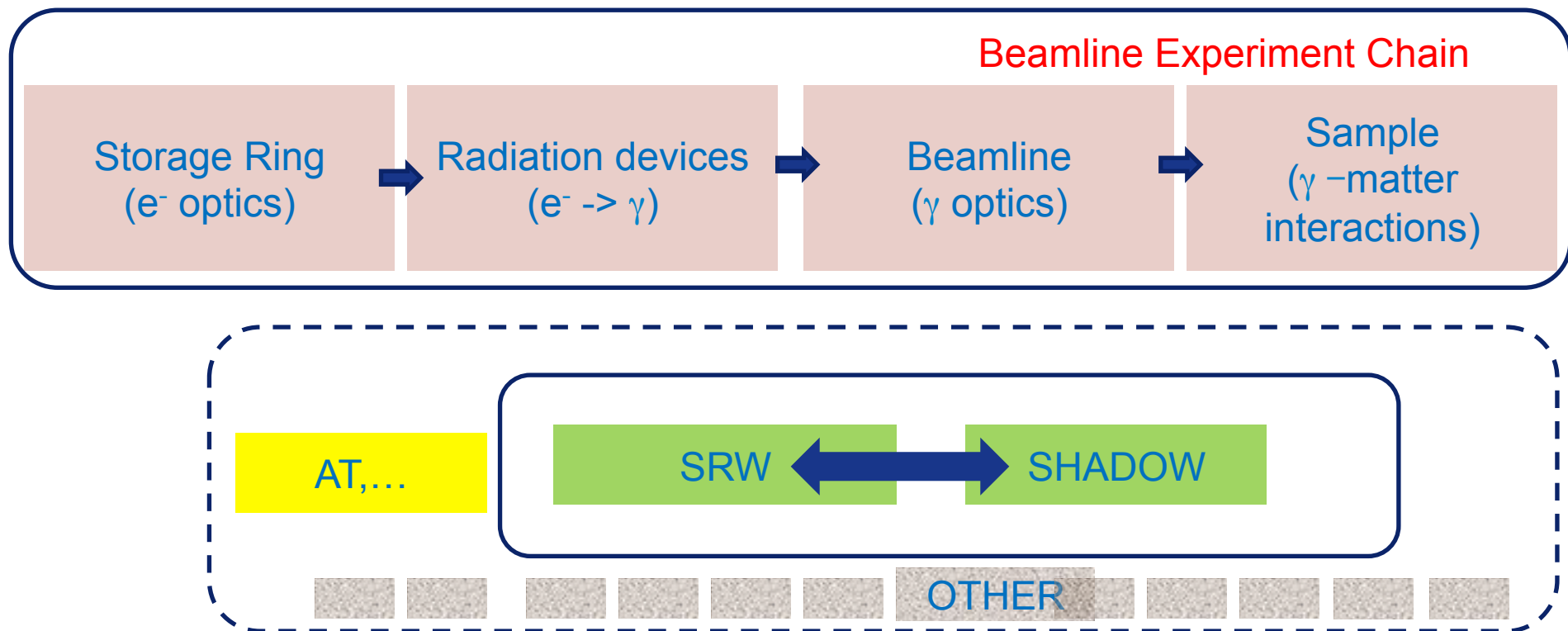


Proceedings of SPIE

"Front Matter: Volume 8141", Proc. SPIE 8141, Advances in Computational Methods for X-Ray Optics II, 814101 (October 07, 2011); doi:10.1117/12.914876; <http://dx.doi.org/10.1117/12.914876>

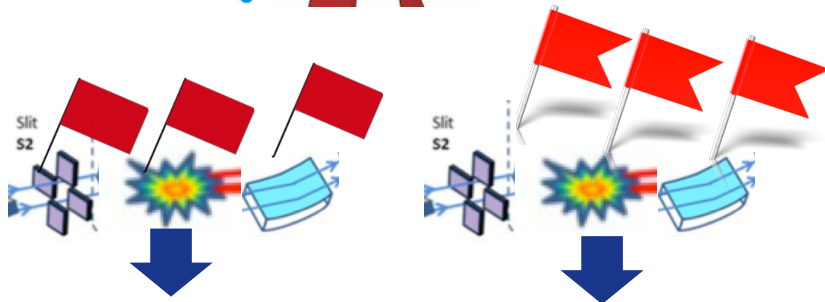
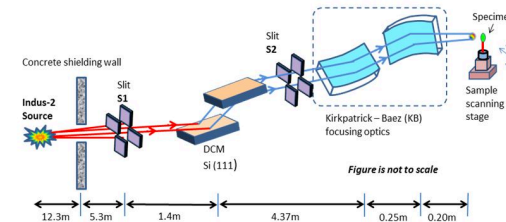
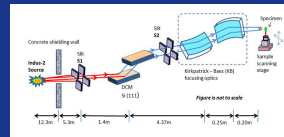
In this sense, some new directions were proposed, like **the use of standard input/output formats...** This goes also in the direction of common format and storage for synchrotron radiation data, a joint project going-on in several facilities. Manuel Sanchez del Rio briefly described the idea of **integrating both SHADOW3 and SRW under the same programming interface**, perhaps creating the basis of a new Open Source project that will incorporate a common Graphical User Interface for these two well known codes plus many others that could be incorporated later. **This schema would make the life easier for the end-user in terms of installation, instrument definition and availability of different models while keeping the independence and authorship of the individual codes unchanged.**

## VIRTUAL EXPERIMENTS: BETTER COMMUNICATION, GO BEYOND OPTICS



### CHALLENGES

- Accelerators: calculate accelerator parameters and incorporate into the radiation emission
- **Optics: communications and interaction between ray-tracing (incoherent) and wave optics (coherent)**
- Sample simulation and opportunities in data analysis



import srwlib...

SRW PY API

SRW (C)

import Shadow...

SHADOW PY API

SHADOW (F)

import optics...

SRW PY API

SRW (C)

SHADOW PY API

SHADOW (F)